

Translated from German by  
 SCIENTIFIC TRANSLATION SERVICES  
 411 Wyntre Lea Dr.  
 Bryn Mawr, PA 19010

D18a

LR

VV M 814/6.76

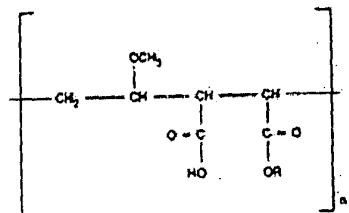
**GAF            GAF (DEUTSCHLAND) GMBH**

**Chemical Division**

SUBSIDIARY OF GAF CORPORATION, NEW YORK  
 RUDOLF-DIESEL-STR. 25 • 502 FRECHEN • TELEPHONE 02234/1051

**GANTREZ# ES Monoester Resins**

**Chemical Composition**



R = C<sub>1</sub>-C<sub>4</sub> alkyl group

**Review of Types**

GANTREZ ES resins are alkyl monoesters of poly(methylvinyl ether/maleic acid). Four different types can be supplied, which differ from each other by different ester groups: ethyl, isopropyl and butyl ester. The polymers are supplied as 50% solutions in alcohol: ethyl alcohol or isopropyl alcohol.

**Table 1:** Typical properties of GANTREZ ES resins.

Property	GANTREZ ES resin			
	ES-225	ES-335-I	ES-425	ES-435
Alkyl group (R) of the monoester	Ethyl	Isopropyl	Butyl	Butyl
Appearance	Clear, viscous liquid	Clear, viscous liquid	Clear, viscous liquid	Clear, viscous liquid
% of solids	50 ± 2	50 ± 2	50 ± 2	50 ± 2
Solvent	Ethanol	Isopropyl alcohol	Ethanol	Isopropyl alcohol
Acid value (100% solids)	275-300	255-285	245-275	245-275
Specific gravity*	0.983	0.957	0.977	0.962

# Registered trademark of GAF Corporation, New York.

\* Values of a typical batch.

Rohstofflabor [Raw Materials Laboratory] der  
 Wella AG  
 Received Nov. 27, 1985